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| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A FILING UNDER 35 U.S.C. 371</b>   |   | ATTORNEY'S DOCKET NUMBER<br><br><b>57.0471 US PCT</b><br>U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/564939</b> |
| INTERNATIONAL APPLICATION NO.<br><br><b>PCT/GB2004/003040</b>   | INTERNATIONAL FILING DATE<br><br><b>12 July 2004 (12.07.2004)</b> | PRIORITY DATE CLAIMED<br><br><b>24 July 2003 (24.07.2003)</b>  |
| TITLE OF INVENTION<br><b>APPARATUS AND METHOD FOR MEASURING CONCENTRATIONS OF SCALE-FORMING IONS</b>  |   |  |
| APPLICANT(S) FOR DO/EO/US<br><b>Li Jiang, Timothy Gareth John Jones, Andrew Meredith, Markus Pagels, and Amilra Prasanna De Silva</b>   |   |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |   |  |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</li> <li>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> <p><b>Items 11 to 20 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76..</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.</li> <li>18. <input checked="" type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4). (<b>WO 2005/014977 A1</b>)</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: <b>PCT/IB/308 Notice Informing Applicant of the Communication of the International Application to the Designated Offices; and a US PCT National Patent Application Data Sheet</b></li> </ol> |   |  |

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|  |              |   |            |   |                     |
|--|--------------|---|------------|---|---------------------|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/564939</b>  |              | INTERNATIONAL APPLICATION NO<br><b>PCT/GB2004/003040</b>                      |            | ATTORNEY'S DOCKET NUMBER<br><b>57.0471 US PCT</b> |                     |
| The following fees are submitted:  |              |   |            | <u>CALCULATIONS</u>                               | <u>PTO USE ONLY</u> |
| 21. <input checked="" type="checkbox"/> Basic national fee..... \$300.00   |              |   |            | \$ 300.00   |                     |
| 22. <input checked="" type="checkbox"/> Examination fee<br>If international preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... \$100.00<br>All other situations..... \$200.00  |              |   |            | \$ 200.00   |                     |
| 23. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Search Authority..... \$100.00<br>International Search Report prepared and provided to the Office ..... \$400.00<br>All other situations..... \$500.00   |              |   |            | \$ 400.00   |                     |
| <b>TOTAL OF 21, 22 and 23 =</b>  |              |   |            | <b>\$ 900.00</b>                                  |                     |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof  |              |   |            |   |                     |
| Total Sheets   | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE       | \$  |                     |
| 62 - 100 =   | 0 / 50 =     | 0   | x \$250.00 | \$  |                     |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).   |              |   |            | \$ 130.00   |                     |
| CLAIMS   | NUMBER FILED | NUMBER EXTRA  | RATE       |   |                     |
| Total claims   | 31 - 20 =    | 11  | x \$50.00  | \$ 550.00   |                     |
| Independent claims   | 2 - 3 =      | 0   | x \$200.00 | \$  |                     |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)  |              |   | + \$360.00 | \$  |                     |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>   |              |   |            | <b>\$</b>   |                     |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.   |              |   |            | \$  |                     |
| <b>SUBTOTAL =</b>  |              |   |            | <b>\$ 1,580.00</b>                                |                     |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).  |              |   |            | \$  |                     |
| <b>TOTAL NATIONAL FEE =</b>  |              |   |            |   |                     |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +   |              |   |            | \$  |                     |
| <b>TOTAL FEES ENCLOSED =</b>   |              |   |            | <b>\$ 1,580.00</b>                                |                     |
|  |              |   |            | <b>Amount to be refunded:</b>                     | \$                  |
|  |              |   |            | <b>Amount to be charged:</b>                      | <b>\$ 1,580.00</b>  |
| a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed.<br>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>19-0615</u> in the amount of <u>\$ 1,580.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>19-0615</u> . A duplicate copy of this sheet is enclosed.<br>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038. |              |   |            |   |                     |
| <b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.</b>  |              |   |            |   |                     |
| SEND ALL CORRESPONDENCE TO:<br><br>Intellectual Property Law Department<br>Schlumberger Doll Research<br>36 Old Quarry Road<br>Ridgefield, CT 06877-4108<br>17 January 2006  |              |   |            |   |                     |
|  |              |   |            | SIGNATURE   |                     |
|  |              |   |            | Jody Lynn DeStefanis                              |                     |
|  |              |   |            | NAME  |                     |
|  |              |   |            | 44,653  |                     |
|  |              |   |            | REGISTRATION NUMBER                               |                     |

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of ) CUSTOMER NO.: 37003  
)  
Li Jiang, Timothy Gareth John Jones, Andrew Meredith, )  
Markus Pagels, and Amilra Prasanna De Silva )  
)  
Appl. No.: To be Assigned )  
Int'l Appl No.: PCT/GB2004/003040 )  
Priority Appl. No. GB 0317260.8 )  
)  
Filing Date: 17 January 2006 )  
Int'l Filing Date: 12 July 2004 )  
Priority Filing Date: 24 July 2003 )  
)  
Title: APPARATUS AND METHOD FOR MEASURING ) Docket No. 57.0471 US PCT  
CONCENTRATIONS OF SCALE-FORMING IONS)

EXPRESS MAIL CERTIFICATE  
UNDER 37 CFR §1.10

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Express Mail Label Number: EV 058372513 US

Date of Deposit: 17 January 2006

I hereby certify that the attached US national patent application and fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to Mail Stop PCT, Assistant Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

(Signature)  
(Print Name)

  
Ruth A. Schreiber

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